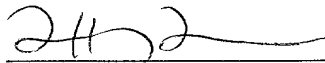


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Tiffany Turner

Date: May 24, 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

HP Docket No.: 10960787-14

Inventor(s): C. Venkatraman, et. al.

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Examiner:

Filed: Herewith

Title: EMBEDDING WEB ACCESS FUNCTIONALITY INTO A
DEVICE FOR USER INTERFACE FUNCTIONS

Continuation Application of Application

Serial No.: 09/721,409

Filed: November 21, 2000

Continuation Application of Application

Serial No.: 09/387,278

Filed: August 31, 1999

Continuation Application of Application

Serial No.: 08/740,289

Filed: October 25, 1996

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

Prior to the examination of the above-referenced application, please amend the application as follows.

IN THE SPECIFICATION

On page 1, line 1, insert:

This application is a continuation of Application No. 09/721,409, filed on November 21, 2000, which is a continuation of Application No. 09/387,278, filed on August 31, 1999, now U.S. Patent No. 6,170,007, which is a continuation of Application No. 08/740,289, filed on October 25, 1996, now U.S. Patent No. 5,956,487.

On page 5, please delete the first paragraph and insert therefor the following:

A solution for providing widely accessible, low cost and enhanced user interface functions for a device is disclosed. The solution involves embedding web access functionality into the device including a web server that provides a device web page. The device includes an embedded network interface that enables access to the device web page by a web browser. A user of the web browser accesses the user interface functions for the device through the device web page. The web server functionality may be implemented with existing circuitry in a device, such as an existing processor, memory, and input/output circuitry that normally perform device-specific functions, thereby avoiding the extra cost and space required for dedicated web server hardware.

Page 11, please delete the second paragraph and insert therefor:

In one embodiment, the device 10 is a printer device wherein the processor 200 and the memory 210 perform image rendering functions and the device-specific hardware 300 includes printer hardware and associated circuitry and wherein the input/output circuitry 220 provides network access to the printer device 10. The web server functionality is embedded into the printer device 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by using the existing input/output circuitry 220 such as Ethernet circuitry to transfer HTML files.

Page 12, please delete the second paragraph and insert therefor:

In yet another embodiment, the device 10 is a washing machine wherein the processor 200 and the memory 210 perform functions for controlling wash cycles. The device-specific hardware 300 includes hardware such as motors, valves, sensors, and associated circuitry. The web server functionality is embedded into the washing machine 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by adding the input/output circuitry to the device 10.

Page 20, please delete the first paragraph and insert therefor:

The web page 18 for the printer may also include manuals, parts lists, and other associated publications. These publications may be stored within the device 10 in, for example, a nonvolatile memory, or may be referenced elsewhere via hyperlinks contained in the web page 18. These publications contain dynamic information such as updated manuals as well as new and updated software driver routines for the device 10.

IN THE CLAIMS

Please cancel claims 1-32 without prejudice.

Please add the following claims:

33. (New) A system for providing a web page for a copier device, comprising:

(a) a copier device web server mechanism including:

a memory embedded in the copier device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a copier device web page that enables control functions for the copier device;

a processor embedded in the copier device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the copier device web page that enables control functions for the copier device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

copier device-specific hardware embedded in the copier device and coupled to the processor;

input/output circuitry embedded in the copier device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the copier device web page.

34. (New) The system of claim 33 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

35. (New) The system of claim 33 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

36. (New) The system of claim 33 wherein the communication path is a home-based network.

37. (New) The system of claim 33 wherein the communication path is a home-based network that includes twisted pair communication links.

38. (New) The system of claim 33 wherein the communication path is a local area network.

39. (New) The system of claim 33 wherein the communication path includes power line communication links.

40. (New) The system of claim 33 wherein the communication path includes radio frequency communication links.

41. (New) The system of claim 33 wherein the communication path includes infrared communication links.

42. (New) The system of claim 33 wherein the communication path includes telephone lines and cellular telephone links.
43. (New) The system of claim 33 wherein the communication path includes a direct Internet connection to the world-wide web.
44. (New) The system of claim 33 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.
45. (New) The system of claim 33 wherein the communication path includes:
a home-based network;
a communication bridge coupled to the home-based network; and
the world-wide web, the world-wide web being coupled to the communication bridge.
46. (New) The system of claim 33 wherein the web browser has audio capability.
47. (New) The system of claim 33 wherein the web browser is embodied in a computer system that executes a set of web browser software.
48. (New) The system of claim 33 wherein the web browser is embodied in specialized television hardware.

49. (New) The system of claim 33 wherein the web browser is embodied in specialized telephone system hardware.
50. (New) The system of claim 33 wherein the input/output circuitry is Ethernet circuitry.
51. (New) A system for providing a web page for a printer device, comprising:
 - (a) a printer device web server mechanism including:
 - a memory embedded in the printer device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a printer device web page that enables control functions for the printer device;
 - a processor embedded in the printer device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the printer device web page that enables control functions for the printer device;
 - software or firmware executed by the processor to service HTTP protocol and to generate HTML files;
 - printer device-specific hardware embedded in the printer device and coupled to the processor;
 - input/output circuitry embedded in the printer device and coupled to the processor; and
 - (b) a communication path coupled to the input/output circuitry; and
 - (c) a web browser coupled to the communication path for rendering the printer device web page.

52. (New) The system of claim 51 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

53. (New) The system of claim 51 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

54. (New) The system of claim 51 wherein the communication path is a home-based network.

55. (New) The system of claim 51 wherein the communication path is a local area network.

56. (New) The system of claim 51 wherein the communication path includes power line communication links.

57. (New) The system of claim 51 wherein the communication path includes radio frequency communication links.

58. (New) The system of claim 51 wherein the communication path includes infrared communication links.

59. (New) The system of claim 51 wherein the communication path includes telephone lines and cellular telephone links.

60. (New) The system of claim 51 wherein the communication path includes a direct Internet connection to the world-wide web.
61. (New) The system of claim 51 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.
62. (New) The system of claim 51 wherein the web browser is embodied in specialized television hardware.
63. (New) The system of claim 51 wherein the web browser is embodied in specialized telephone system hardware.
64. (New) The system of claim 51 wherein the input/output circuitry is Ethernet circuitry.
65. (New) A system for providing a web page for a fax machine device, comprising:
 - (a) a fax machine device web server mechanism including:
a memory embedded in the fax machine device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a fax machine device web page that enables control functions for the fax machine device;
a processor embedded in the fax machine device and coupled to the memory, the processor being configured to perform device-specific

functions and web server functions, wherein the web server functions include generating the fax machine device web page that enables control functions for the fax machine device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

fax machine device-specific hardware embedded in the fax machine device and coupled to the processor;

input/output circuitry embedded in the fax machine device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the fax machine device web page.

66. (New) The system of claim 65 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

67. (New) The system of claim 65 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

68. (New) The system of claim 65 wherein the communication path is a home-based network.

69. (New) The system of claim 65 wherein the communication path is a local area network.

70. (New) The system of claim 65 wherein the communication path includes power line communication links.

71. (New) The system of claim 65 wherein the communication path includes radio frequency communication links.

72. (New) The system of claim 65 wherein the communication path includes infrared communication links.

73. (New) The system of claim 65 wherein the communication path includes telephone lines and cellular telephone links.

74. (New) The system of claim 65 wherein the communication path includes a direct Internet connection to the world-wide web.

75. (New) The system of claim 65 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.

76. (New) The system of claim 65 wherein the web browser is embodied in specialized television hardware.

77. (New) The system of claim 65 wherein the web browser is embodied in specialized telephone system hardware.

78. (New) The system of claim 65 wherein the input/output circuitry is Ethernet circuitry.

79. (New) A system for providing a web page for a video player device that reads video and audio information from a storage medium, comprising:

(a) a video player device web server mechanism including:

a memory embedded in the video player device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a video player device web page that enables control functions for the video player device;

a processor embedded in the video player device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the video player device web page that enables control functions for the video player device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

video player device-specific hardware embedded in the video player device and coupled to the processor;

input/output circuitry embedded in the video player device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the video player device web page.

80. (New) The system of claim 79 wherein the storage medium is an optical storage medium.

81. (New) The system of claim 79 wherein the storage medium is magnetic tape.
82. (New) The system of claim 79 wherein the video player is a video player/recorder that reads and writes video and audio information to an optical storage medium.
83. (New) The system of claim 79 wherein the video player is a video player/recorder that reads and writes video and audio information to a magnetic tape storage medium.
84. (New) The system of claim 79 wherein the video player device-specific hardware includes a motor.
85. (New) The system of claim 79 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.
86. (New) The system of claim 79 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.
87. (New) The system of claim 79 wherein the communication path is a home-based network.

88. (New) The system of claim 79 wherein the communication path is a local area network.

89. (New) The system of claim 79 wherein the communication path includes power line communication links.

90. (New) The system of claim 79 wherein the communication path includes radio frequency communication links.

91. (New) The system of claim 79 wherein the communication path includes infrared communication links.

92. (New) The system of claim 79 wherein the communication path includes telephone lines and cellular telephone links.

93. (New) The system of claim 79 wherein the communication path includes a direct Internet connection to the world-wide web.

94. (New) The system of claim 79 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the
communication bridge.

95. (New) The system of claim 79 wherein the web browser is embodied in specialized television hardware.

96. (New) The system of claim 79 wherein the web browser is embodied in specialized telephone system hardware.
97. (New) The system of claim 79 wherein the input/output circuitry is Ethernet circuitry.
98. (New) A system for providing a web page for a television device, comprising:
 - (a) a television device web server mechanism including:
 - a memory embedded in the television device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a television device web page that enables control functions for the television device;
 - a processor embedded in the television device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the television device web page that enables control functions for the television device;
 - software or firmware executed by the processor to service HTTP protocol and to generate HTML files;
 - television device-specific hardware embedded in the television device and coupled to the processor;
 - input/output circuitry embedded in the television device and coupled to the processor; and
 - (b) a communication path coupled to the input/output circuitry; and
 - (c) a web browser coupled to the communication path for rendering the television device web page.

99. (New) The system of claim 98 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

100. (New) The system of claim 98 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

101. (New) The system of claim 98 wherein the communication path is a home-based network.

102. (New) The system of claim 98 wherein the communication path is a local area network.

103. (New) The system of claim 98 wherein the communication path includes power line communication links.

104. (New) The system of claim 98 wherein the communication path includes radio frequency communication links.

105. (New) The system of claim 98 wherein the communication path includes infrared communication links.

106. (New) The system of claim 98 wherein the communication path includes telephone lines and cellular telephone links.

107. (New) The system of claim 98 wherein the communication path includes a direct Internet connection to the world-wide web.
108. (New) The system of claim 98 wherein the communication path includes:
 - a local area network;
 - a communication bridge coupled to the local area network; and
 - the world-wide web, the world-wide web being coupled to the communication bridge.
109. (New) The system of claim 98 wherein the web browser is embodied in specialized television hardware.
110. (New) The system of claim 98 wherein the web browser is embodied in specialized telephone system hardware.
111. (New) The system of claim 98 wherein the input/output circuitry is Ethernet circuitry.
112. (New) A system for providing a web page for a thermostat device, comprising:
 - (a) a thermostat device web server mechanism including:
 - a memory embedded in the thermostat device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a thermostat device web page that enables control functions for the thermostat device;
 - a processor embedded in the thermostat device and coupled to the memory, the processor being configured to perform device-specific

functions and web server functions, wherein the web server functions include generating the thermostat device web page that enables control functions for the thermostat device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

thermostat device-specific hardware embedded in the thermostat device and coupled to the processor;

input/output circuitry embedded in the thermostat device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the thermostat device web page.

113. (New) The system of claim 112 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

114. (New) The system of claim 112 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

115. (New) The system of claim 112 wherein the communication path is a home-based network.

116. (New) The system of claim 112 wherein the communication path is a local area network.

117. (New) The system of claim 112 wherein the communication path includes power line communication links.

118. (New) The system of claim 112 wherein the communication path includes radio frequency communication links.

119. (New) The system of claim 112 wherein the communication path includes infrared communication links.

120. (New) The system of claim 112 wherein the communication path includes telephone lines and cellular telephone links.

121. (New) The system of claim 112 wherein the communication path includes a direct Internet connection to the world-wide web.

122. (New) The system of claim 112 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the
communication bridge.

123. (New) The system of claim 112 wherein the web browser is embodied in specialized television hardware.

124. (New) The system of claim 112 wherein the web browser is embodied in specialized telephone system hardware.

125. (New) The system of claim 112 wherein the input/output circuitry is Ethernet circuitry.

126. (New) A system for providing a web page for a refrigerator device, comprising:

(a) a refrigerator device web server mechanism including:

a memory embedded in the refrigerator device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a refrigerator device web page that enables control functions for the refrigerator device;

a processor embedded in the refrigerator device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the refrigerator device web page that enables control functions for the refrigerator device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

refrigerator device-specific hardware embedded in the refrigerator device and coupled to the processor;

input/output circuitry embedded in the refrigerator device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the refrigerator device web page.

127. (New) The system of claim 126 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

128. (New) The system of claim 126 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

129. (New) The system of claim 126 wherein the communication path is a home-based network.

130. (New) The system of claim 126 wherein the communication path is a local area network.

131. (New) The system of claim 126 wherein the communication path includes power line communication links.

132. (New) The system of claim 126 wherein the communication path includes radio frequency communication links.

133. (New) The system of claim 126 wherein the communication path includes infrared communication links.

134. (New) The system of claim 126 wherein the communication path includes telephone lines and cellular telephone links.

135. (New) The system of claim 126 wherein the communication path includes a direct Internet connection to the world-wide web.

136. (New) The system of claim 126 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.

137. (New) The system of claim 126 wherein the web browser is embodied in specialized television hardware.

138. (New) The system of claim 126 wherein the web browser is embodied in specialized telephone system hardware.

139. (New) The system of claim 126 wherein the input/output circuitry is Ethernet circuitry.

140. (New) A system for providing a web page for a washing machine device, comprising:

- (a) a washing machine device web server mechanism including:
a memory embedded in the washing machine device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a washing machine device web page that enables control functions for the washing machine device;

a processor embedded in the washing machine device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the washing machine device web page that enables control functions for the washing machine device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

washing machine device-specific hardware embedded in the washing machine device and coupled to the processor;

input/output circuitry embedded in the washing machine device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the washing machine device web page.

141. (New) The system of claim 140 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

142. (New) The system of claim 140 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

143. (New) The system of claim 140 wherein the communication path is a home-based network.

144. (New) The system of claim 140 wherein the communication path is a local area network.

145. (New) The system of claim 140 wherein the communication path includes power line communication links.

146. (New) The system of claim 140 wherein the communication path includes radio frequency communication links.

147. (New) The system of claim 140 wherein the communication path includes infrared communication links.

148. (New) The system of claim 140 wherein the communication path includes telephone lines and cellular telephone links.

149. (New) The system of claim 140 wherein the communication path includes a direct Internet connection to the world-wide web.

150. (New) The system of claim 140 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.

151. (New) The system of claim 140 wherein the web browser is embodied in specialized television hardware.

152. (New) The system of claim 140 wherein the web browser is embodied in specialized telephone system hardware.

153. (New) The system of claim 140 wherein the input/output circuitry is Ethernet circuitry.

154. (New) A system for providing a web page for a disk drive device, comprising:

(a) a disk drive device web server mechanism including:

a memory embedded in the disk drive device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a disk drive device web page that enables control functions for the disk drive device;

a processor embedded in the disk drive device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the disk drive device web page that enables control functions for the disk drive device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

disk drive device-specific hardware embedded in the disk drive device and coupled to the processor;

input/output circuitry embedded in the disk drive device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the disk drive device web page.

155. (New) The system of claim 154 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

156. (New) The system of claim 154 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

157. (New) The system of claim 154 wherein the communication path is a home-based network.

158. (New) The system of claim 154 wherein the communication path is a local area network.

159. (New) The system of claim 154 wherein the communication path includes power line communication links.

160. (New) The system of claim 154 wherein the communication path includes radio frequency communication links.

161. (New) The system of claim 154 wherein the communication path includes infrared communication links.

162. (New) The system of claim 154 wherein the communication path includes telephone lines and cellular telephone links.

163. (New) The system of claim 154 wherein the communication path includes a direct Internet connection to the world-wide web.

164. (New) The system of claim 154 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.

165. (New) The system of claim 154 wherein the web browser is embodied in specialized television hardware.

166. (New) The system of claim 154 wherein the web browser is embodied in specialized telephone system hardware.

167. (New) The system of claim 154 wherein the input/output circuitry is Ethernet circuitry.

168. (New) A system for providing a web page for an oscilloscope device, comprising:

- (a) an oscilloscope device web server mechanism including:
 - a memory embedded in the oscilloscope device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating an oscilloscope device web page that enables control functions for the oscilloscope device;
 - a processor embedded in the oscilloscope device and coupled to the memory, the processor being configured to perform device-specific

functions and web server functions, wherein the web server functions include generating the oscilloscope device web page that enables control functions for the oscilloscope device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

oscilloscope device-specific hardware embedded in the oscilloscope device and coupled to the processor;

input/output circuitry embedded in the oscilloscope device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the oscilloscope device web page.

169. (New) The system of claim 168 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

170. (New) The system of claim 168 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

171. (New) The system of claim 168 wherein the communication path is a home-based network.

172. (New) The system of claim 168 wherein the communication path is a local area network.

173. (New) The system of claim 168 wherein the communication path includes power line communication links.

174. (New) The system of claim 168 wherein the communication path includes radio frequency communication links.

175. (New) The system of claim 168 wherein the communication path includes infrared communication links.

176. (New) The system of claim 168 wherein the communication path includes telephone lines and cellular telephone links.

177. (New) The system of claim 168 wherein the communication path includes a direct Internet connection to the world-wide web.

178. (New) The system of claim 168 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the
communication bridge.

179. (New) The system of claim 168 wherein the web browser is embodied in specialized television hardware.

180. (New) The system of claim 168 wherein the web browser is embodied in specialized telephone system hardware.

181. (New) The system of claim 168 wherein the input/output circuitry is Ethernet circuitry.

182. (New) A system for providing a web page for a spectrum analyzer device, comprising:

(a) a spectrum analyzer device web server mechanism including:

a memory embedded in the spectrum analyzer device, the memory being configured to perform device-specific functions and web server functions, wherein the web server functions include generating a spectrum analyzer device web page that enables control functions for the spectrum analyzer device;

a processor embedded in the spectrum analyzer device and coupled to the memory, the processor being configured to perform device-specific functions and web server functions, wherein the web server functions include generating the spectrum analyzer device web page that enables control functions for the spectrum analyzer device;

software or firmware executed by the processor to service HTTP protocol and to generate HTML files;

spectrum analyzer device-specific hardware embedded in the spectrum analyzer device and coupled to the processor;

input/output circuitry embedded in the spectrum analyzer device and coupled to the processor; and

(b) a communication path coupled to the input/output circuitry; and

(c) a web browser coupled to the communication path for rendering the spectrum analyzer device web page.

183. (New) The system of claim 182 wherein the processor also performs control and information monitoring and logging functions by executing the software or firmware.

184. (New) The system of claim 182 wherein the software or firmware includes communication software or firmware that the processor executes to drive the input/output circuitry.

185. (New) The system of claim 182 wherein the communication path is a home-based network.

186. (New) The system of claim 182 wherein the communication path is a local area network.

187. (New) The system of claim 182 wherein the communication path includes power line communication links.

188. (New) The system of claim 182 wherein the communication path includes radio frequency communication links.

189. (New) The system of claim 182 wherein the communication path includes infrared communication links.

190. (New) The system of claim 182 wherein the communication path includes telephone lines and cellular telephone links.

191. (New) The system of claim 182 wherein the communication path includes a direct Internet connection to the world-wide web.

192. (New) The system of claim 182 wherein the communication path includes:
a local area network;
a communication bridge coupled to the local area network; and
the world-wide web, the world-wide web being coupled to the communication bridge.

193. (New) The system of claim 182 wherein the web browser is embodied in specialized television hardware.

194. (New) The system of claim 182 wherein the web browser is embodied in specialized telephone system hardware.

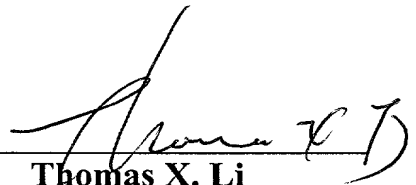
195. (New) The system of claim 182 wherein the input/output circuitry is Ethernet circuitry.

REMARKS

The specification has been amended to correct some typographical errors. New claims have been added to cover various embodiments of the invention. No new matter has been added. Applicants respectfully request allowance of this application.

Respectfully submitted,

Chandrasekar Venkatraman, et al.

BY: 

Thomas X. Li

Reg. No. **37,079**

Date: **May 24, 2001**

Tel. No.: **(650) 857-5972**

Hewlett-Packard Company
Legal Department, M/S 20BN
P.O. Box 10301
Palo Alto, CA 94303-0890

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Page 5, first paragraph

A solution for providing widely accessible, low cost and enhanced user interface functions for a device is disclosed. The solution involves embedding web access functionality into the device including a web server that provides a device web page. The device includes an embedded network interface that enables access to the device web page by a web browser. A user of the web browser accesses the user interface functions for the device through the device web page. The web server functionality may be implemented with existing circuitry in a device, such as an [exiting] existing processor, memory, and input/output circuitry that normally perform device-specific functions, thereby avoiding the extra cost and space required for dedicated web server hardware.

Page 11, second paragraph

In one embodiment, the device 10 is a printer device wherein the processor 200 and the memory 210 [preform] perform image rendering functions and the device-specific hardware 300 includes printer hardware and associated circuitry and wherein the input/output circuitry 220 provides network access to the printer device 10. The web server functionality is embedded into the printer device 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by using the existing input/output circuitry 220 such as Ethernet circuitry to transfer HTML files.

Page 12, second paragraph

In yet another embodiment, the device 10 is a washing machine wherein the processor 200 and the memory 210 [preform] perform functions for controlling wash cycles. The device-specific hardware 300 includes hardware such as motors, valves, sensors, and associated circuitry. The web server functionality is embedded into the washing machine 10 by providing software or firmware for the processor 200 and by utilizing space available in the memory 210 and by adding the input/output circuitry to the [video] device 10.

Page 20, first paragraph

The web page 18 for the printer may also include manuals, parts lists, and other associated publications. These publications may be stored within the device 10 in, for example, a nonvolatile memory, or may be referenced elsewhere via hyperlinks contained in the web page 18. These publications contain dynamic information such as updated manuals as well as new and updated software driver routines for the video device 10.